



Ruder Bošković, rad Ivana Meštrovića. Institut »Ruder Bošković« u Zagrebu

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Bošković i domovina

Iako je cijeloga života radio i djelovao u stranim zemljama, Ruder Bošković je stalno bio vezan uz rodni kraj. Dopisivao se s bratom Božom i sestrom Anicom, koji su živjeli u Dubrovniku, i preko njih se zanimao za događaje u rodnome gradu. Po običaju onoga vremena, Bošković je pisma uglavnom pisao talijanskim jezikom, ali je često umetao velike dijelove na hrvatskom jeziku. Sa sestrom Anicom vrlo je često izmjenjivao i pisma na hrvatskom jeziku. Sačuvana je i opširna prepiska s dubrovačkim Senatom u vezi s rješavanjem raznih diplomatsko-političkih poslova Dubrovačke Republike.

Kad god bi mu se pružila prilika, Bošković je isticao svoju privrženost rodnom kraju, te se ponosio njegovom kulturom i prošlošću. Tako u poemi *Les éclipses*, objavljenj 1779. godine, na jednome mjestu govori i o svojoj domovini Dubrovniku i ističe da »gajimo svim žarom egzaktne znanosti, a još više lijepu knjigu bilo na latinskom bilo na ilirskom (hrvatskom) jeziku, kojim se kod nas govori«. S ponosom spominje mnoge istaknute Dubrovčane, kao matematičara Marina Getaldića, zatim Stjepana Gradića, Benedikta Staya i mnoge druge, a posebno ističe da na narodnom jeziku (la langue nationale) postoje dva izvrsna epa, *Osmanida* i *Kristijada*.*

Nije dopuštao da ga nazivaju Talijanom, iako je dugo živio u Italiji i ondje mnogo pridonio talijanskoj kulturi, predajući na sveučilištima i utemeljivši Brersku zvezdarnicu.

* *Les éclipses*, str. 410.

Bošković and His Homeland

Although he lived and worked abroad for the greater part of his life, Bošković maintained continuous contact with his homeland. He frequently exchanged letters with his brother Božo and his sister Anica, who lived in Dubrovnik, always showing a lively interest in the developments in his native city. In accordance with contemporary custom, Bošković's letters were mainly written in Italian, although they often included long passages in Croatian. His letters addressed to his sister Anica were often written entirely in Croatian. Bošković also kept up an extensive correspondence with the Dubrovnik Senate related to his diplomatic services rendered to the Republic.

Bošković emphasized his attachment to his homeland, and showed pride in its culture and history, whenever he had the opportunity. Thus, in his poem *Les éclipses*, published in 1779, he also speaks of his homeland, Dubrovnik, and emphasizes "our enthusiasm for exact science, and even more for a good book, be it in Latin or in Illyrian [Croatian], the language spoken in our country." He also makes proud mention of many outstanding Dubrovnik figures, e.g., the mathematician Marin Getaldić, Stjepan Gradić, Benedict Stay and many others; in particular he noted two superb epics, *Osmanida* and *Kristijada*, written in the national language (*la langue nationale*).*

He never allowed anyone to call him an Italian although he spent a substantial part of his

* *Les éclipses*, p. 410.

Bošković je tokom 26 godina, od 1756. do 1783. obavljao različite diplomatske poslove za Dubrovačku Republiku. Sve je te poslove obavljao ne žaleći slobodno vrijeme, pa je često morao zapustiti svoje znanstvene obaveze, jer je tih poslova bilo mnogo. Primjerice, godine 1756. zauzimao se na francuskom dvoru za obustavljanje gradnje francuskog broda u Dubrovniku jer je prijetila opasnost da Engleska, koja je bila u ratu s Francuskom, smatra Dubrovnik neprijateljskom zemljom. Bošković je uspio u Rimu, preko francuskog ambasadora, riješiti taj problem u korist Dubrovačke Republike i tako sačuvati njezinu neutralnost. Drugom prilikom, kad se 1760. našao u Parizu, Bošković je uspješno riješio pitanje francuskog konzula u Dubrovniku koji nije bio po volji Dubrovačkoj Republici. Bošković se i kasnije više puta koristio svojim vezama i poznanstvom da bi od francuske vlade ispolovao rješenja i odluke koje su odgovarale Dubrovačkoj Republici.

Vrlo je važna bila Boškovićeve intervencija godine 1771. kad je zaprijetila opasnost da ruski brodovi napadnu Dubrovnik. Kako su tada Rusija i Turska bile u ratu, ruski su ratni brodovi htjeli s mora napasti turske teritorije. Pri plovidbi Sredozemnim morem naišli su na dubrovačke brodove koji su prevozili raznu robu u Carigrad. Komandant ruske flote Orlov smatrao je to činom neprijateljstva prema Rusiji, pa je htio bombardirati Dubrovnik. Dubrovačka Republika obratila se Boškoviću da poljskog kralja Stanislava, štićenika ruske carice Katarine, zamoli da caricu uvjeri kako je Dubrovnik neutralna zemlja koja trguje sa svima. Bošković je poljskog kralja dobro poznao iz vremena kad je boravio u Poljskoj, pa mu se obratio sa pismom i zamolio ga za pomoć. To je pismo prepuno Boškovićevih osjećaja prema domovini te tuđe i bola zbog mogućnosti uništenja rodno grada. Evo odlomka iz tog pisma:

"Ujetećem se Vašem veličanstvu moleći nezaluzeno dobroćinstvom, ali poznavajući Vašu velikodušnost prema meni. To je moja domovina; tamo živi moja rodbina a među njima i majka, 98-godišnja starica — još živa i kreпка, koja je radi svoje naravi, a i radi starosti puna straha. Njezina pisma su me ispunila još većim strahom. ... Domovina pred propasti, stogodišnja majka drhti od straha pred tu-

ed in the same language. Some time later, in another letter to his brother, Bošković exclaimed *Evviva Haddick e i nostri Croati* (Long live Haddick and our Croats).*

For twenty-six years, from 1756 to 1783, Bošković rendered a number of diplomatic services to the Dubrovnik Republic, sparing no time and, therefore, often at the expense of his scientific work. Thus, in 1756 he was asked to intercede on behalf of the Republic with the French Court, i.e., to stop the building of a French ship in Dubrovnik. Namely, the Republic feared that England, then at war with France, might consider Dubrovnik an enemy. Through the French Ambassador in Rome Bošković was able to resolve the matter in a satisfactory way thus safeguarding the neutrality of the Republic. He was also successful in resolving the conflict between the Republic and the French Consul in Dubrovnik. Bošković also used his connections and acquaintances on a number of other occasions in order to secure (French) decisions favourable to the Republic.

One of Bošković's important interventions refers to the year 1771 when there was a danger of the Russian navy attacking Dubrovnik. At that time Russia and Turkey were at war, and the Russians wanted to attack Turkish territories from the sea. While sailing in the Mediterranean the Russian navy ran into some ships from Dubrovnik carrying various goods to Constantinople. Admiral Orloff, commander of the Russian fleet, deemed this a hostile act to Russia, and even threatened to bombard Dubrovnik. The Republic asked Bošković to intercede on its behalf with the Polish king Stanislas, the protégé of Catherine I of Russia, and convince him that Dubrovnik was a neutral party trading with all sides. Bošković had met, and had been on good terms with, the Polish king during his visit to Poland, and wrote him a letter asking for his help. The letter reflects Bošković's profound affection for his homeland, and his sorrow and pain caused by its threatened destruction. Here is an excerpt:

"I appeal to Your Majesty, begging not for a deserved act of kindness, but aware of your

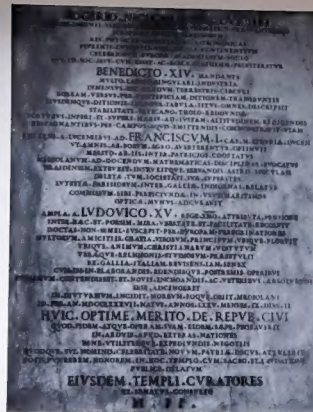
* Letters of September 2 and October 24, 1757, published in V. Vančák (Ref. 10), pp. 344 — 346, 377.

Spomen-ploča u dubrovačkoj katedrali, postavljena nakon Boškovićeve smrti

čom bombi koja će se svaliti na njezinu glavu, opća konsternacija koja izbija iz pisama što ih primam iz mog rodno grada — to je ono što me tjera da Vam se obratim. —"

Kao i u tog prilici, Bošković se zdušno zalagao i u mnogim drugim prilikama, koristeći se svojim poznanstvom koja je stekao zahvaljujući znanstvenju reputaciji, izlažući se ponekad i neugodnostima i teškoćama. Ali, Bošković nije samo diplomatskim poslovima služio svojoj domovini. Kad god je trebalo obračunati su mu se iz Dubrovnika da im daje savjete u vezi s pojedinim poslovima. Tako, kad je godine 1780. trebalo zamijeniti gradski sat, Bošković je tražio u stranom svijetu takav koji bi dobro odgovarao potrebama i slao u Dubrovnik nacrte stapa za koji je mislio da odgovara gradskom zvoniku.

* Pismo od 12. listopada 1771. objavio je F. Rakći u *Rado Jugoslavenske akademije*, knj. 87, 88, 90, Zagreb, 1887—1888, str. 165—167.



Memorial tablet in the Dubrovnik Cathedral, unveiled after Bošković's death.

magnanimity in my regard. This is my homeland, and my family live there, including my mother, an old woman of 98 — still vigorous and active, and full of fear because of her nature and of her age. ... Her letters have filled me with even greater fear. ... My homeland is facing destruction, my old mother is all a-tremble at the thought of the hail-storm of bombs that threaten to rain down upon her head, a general consternation is felt in the letters I am receiving from my native city — this is what compels me to appeal to you.**

But Bošković did not serve his homeland in diplomatic ways alone. Whenever the need arose, the Republic turned to him for advice on a variety of matters. Thus, when the municipal clock had to be replaced in 1780, Bošković took great pains to find a clock meeting

** Letter of October 12, 1771; published by F. Rakći in the *Papers of the Yugoslav Academy*, Vols. 87—90, Zagreb 1887—1888, pp. 165—167.

Dubrovačka Republika znala je cijeniti Boškovićeve zasluge. Vidljivo je to iz pisama koja mu je slala. A neposredno nakon njegove smrti Dubrovačka Republika postavila mu je spomen-ploču u dubrovačkoj katedrali na današnjoj Držicevoj poljani, jedinu koju je ikada postavila nekom Dubrovčaninu. Koliko je to bio vrijedan i izuzetan čin pokazuje činjenica da je Dubrovačka Republika vrlo rijetko postavljala obilježja svojim zaslužnim sugrađanima. Učinila je to još samo jedanput kad je postavila poprsje Mihi Pracatu u atriju Kneževa dvora.

the requirements, and provided several designs for a clock which in his view would match the municipal belfry.

The Republic duly appreciated Bošković's merits, as evinced by the letters he received. Immediately after his death, the Senate had a memorial tablet placed in the Dubrovnik Cathedral (in the present-day square of Držiceva Poljana) — the only memorial of the kind ever to honour a Dubrovnik citizen. This was truly a worthy and exceptional homage for the Republic rarely commemorated its meritorious citizens in such a fashion. It had done so only on one other occasion when a bust of Miho Pracat was placed in the atrium of the Rector's Palace.



Katedrala u Dubrovniku u kojoj se nalazi spomen-ploča Ruđera Boškoviću

The Cathedral in Dubrovnik with the tablet commemorating Bošković.

Boškovićev odnos prema stavovima i metodama zastupanima u Rimskom kolegiju

Bošković and the Collegium Romanum

U prvim godinama svoga znanstvenog rada Bošković je istraživao i kritički raspravljao o temeljnim pojmovima znanosti. Mnoge njegove rasprave iz tog razdoblja posvećene su pravo raščišćavanju temeljnih problema. Morao je zauzeti stav i prema nekim ključnim pitanjima njutonizma i gibanja Zemlje. Prvo se u Rimskom kolegiju, kako je rečeno, nije dobro gledalo, a drugo je bilo zabranjeno. Odgajan u duhu geocentričkog sustava i uvjeren kako je taj sustav upravo u skladu s teološkim stavovima crkve, Bošković je morao biti oprezan, a i sam sa sobom razriješiti neka dvoumljenja. Zato se u njegovim raspravama neprestano osjeća želja da se učenje o položaju Zemlje i njutonizam usklade sa službenim stavom.

Godine 1742. u raspravi *De annuis fixarum aberrationibus dissertatio* (Rasprava o godišnjim aberacijama stajačica), uz kritički osvrt na prividne promjene položaja zvijezda na nebeskom svodu zbog gibanja Zemlje i brzine širenja svjetlosti, Bošković se zaustavlja na onome što ga najviše muči, a to je Kopernikov sustav gibanja Zemlje. Povod je toga bilo otkriće paralakse* zvijezda stajačica (Hook, Flamsteed) krajem 17. stoljeća, što je za mnoge znanstvenike bilo potvrda gibanja Zemlje. Bošković misli da takve izjave znanstvenika nisu dovoljno argumentirane, ali sam ne izvođi dokaze da se Zemlja giba, kao ni da miruje, nego samo želi pokazati da povezivanje ot-

I n the first years of his scientific involvement Bošković studied and critically discussed many basic scientific concepts. Many of his treatises written during this early period were devoted precisely to the clarification of fundamental issues. This included taking a stand on some fundamental questions regarding Newtonism and the motion of the Earth. As already mentioned, the Roman College disapproved of the former, and the teaching of the latter was prohibited. Bošković's education had been founded on the geocentric system as the only one conforming to the theological views of the Church. He had to proceed carefully, therefore, and to resolve some private dilemmas along the way. This is why all his treatises reflect a desire to bring the teaching about the motion of the Earth and Newtonian principles into line with official views.

In his treatise *De annuis fixarum aberrationibus dissertatio* (Dissertation on the Yearly Aberrations of Fixed Stars; 1742), while critically discussing the apparent changes of star positions in the sky due to the motion of the Earth and to the speed of light, Bošković dwelt in particular on the problem which most beset him — the Copernican system and the motion of the Earth. He was also intrigued by the discovery of the parallax of fixed stars (Hook, Flamsteed) in the late 17th century, which many scientists held to be the proof of the motion of the Earth.* Bošković

* Taj kut pod kojim bi se sa zvijezde vidjela udaljenost Zemlje od Sunca u Boškovićeva doba značilo je mjeru promjene smjera u kojemu se sa Zemlje u različito godišnje doba vidi neka zvijezda, čime se htjelo dokazati gibanje Zemlje.

* The angle at which the distance between the Earth and the Sun would be observed from a star meant, in Bošković's time, the measure of the change of direction from which a star was observed from the Earth in different seasons, adduced as a proof of the motion of the Earth.